Irritability is frequently the main presenting complaint of perimenopausal and postmenopausal women; yet, studies specifically researching on irritability in this population are lacking.

As it remains controversial whether mood symptoms related to menopause are independently associated with hormonal changes or whether they are secondary to vasomotor or other bothersome symptoms of menopause, such as insomnia. This study aims to assess irritability in either perimenopausal or postmenopausal women, to look for possible associations with vasomotor symptoms, insomnia and chronic disease, and to explore possible hormonal links with sex steroids, gonadotrophins, prolactin and thyroid hormones. A total of 163 peri- and postmenopausal women, non-hormonal therapy or tibolone users, attending a menopause clinic were included in this cross-sectional study.

The subjects completed the Irritability, Depression, Anxiety Scale, which is an 18-item self-report scale that assesses irritability as a temporary psychological state. Irritability is divided into ‘outwardly directed’ if it is expressed toward others and ‘inwardly directed’ if it is directed toward oneself. Climacteric symptoms were evaluated by Greene’s scale, which provides subscores for vasomotor symptoms. Insomnia was measured by the Athens Insomnia Scale. Chronic disease refers to the existence of hypertension, cardiac disease, diabetes mellitus or thyroid disease.

The study sample consisted of 163 women, with a mean age of 55.1 years (SD = 5.7). Of the total sample, 124 women were postmenopausal and 26 perimenopausal. Fifty-four women suffered from chronic disease. The mean score for inward irritability was 5.1 (SD = 2.4) and 5.9 (SD = 2.7) for outward irritability. The mean scores for inward and outward irritability, insomnia and vasomotor symptoms were not different between peri- and postmenopausal women (analysis of covariance, p > 0.05). A significant positive correlation was found between outward irritability and FSH (r = 0.25, p = 0.005) and LH levels (r = 0.26, p = 0.006). There was no significant association between inward irritability and hormonal levels. No significant relationships were detected between vasomotor symptoms, insomnia and menopausal status and the 2 subscales of irritability.

Multiple linear regression analysis indicated that women with chronic disease had a significantly higher score on both the inward and the outward irritability scales, with effect sizes equal to 44.6 and 40.0%, respectively. Furthermore, in the multivariable model outward irritability was associated both with increased levels of FSH and LH, with effect sizes for a 20-unit increase equal to 22.2 and 37.0%, respectively. Outward and inward irritability of peri- and postmenopausal women was found to be related to chronic disease, a factor that is not specific to menopause but may be partially influenced by the older age of menopausal women. Outwardly directed irritability was found to be related to FSH and LH levels.

There are no data supporting a possible direct association between FSH and LH and the expression of outward irritability. However, as FSH and LH are markers of ovarian aging and menopause, the results of this study may give an indication of a link between outward irritability and menopause.